

REMARKS

The Examiner applied a single reference, namely the article by Morita. It is to be appreciated that Morita relates to a “traveling wave” droplet generator, not a “standing wave” droplet generator as in the case of the present invention. In this regard, claim 10 of the present application specifies “a standing wave being present in the ink in the cavity during operation of the generator”. At §3.2.1, first sentence, Morita discloses the adaption of its traveling wave generator to create a standing wave generator. This is done by replacing the acoustic terminator at one end of the cylindrical ink cavity by an acoustic reflector. It is to be stressed that this adaption is solely for the purpose of demonstrating that a standing wave generator would not remotely operate satisfactorily. In this regard, attention is directed to the remainder of §3.2.1, where it is clearly stated that when a standing wave is present, the required uniform jet break up is not remotely achieved. It is to be understood that the adaption in Morita to create a standing wave generator is merely for the purpose of experimental comparison, and that in Morita there is never any intention to present the standing wave generator as a practicable and feasible design.

Claim 10 of the present application specifies “said cavity having a cross-sectional area which varies along said length (of the cavity) in a manner so as to tailor a form of said standing wave in the cavity”. In Morita, the cross-sectional area of the ink cavity does *not* vary along its length, it remains constant. The Examiner's attention is directed to Fig. 1 of Morita, and also the second paragraph of the second column on the first page of

Morita. The ink cavity of Morita is a cylindrical tube -- its cross-section is a circle, which circle does not vary along the length of the tube. In conclusion, notwithstanding the argumentation of the previous paragraph, claim 10 is distinguished from Morita in that Morita's ink cavity is of *constant* cross-section.

It is a crucial feature of claim 10 that the ink cavity's cross-sectional area varies. It is this feature which achieves uniform jet break up in the presence of a standing wave. An explanation in this regard is given in the paragraph bridging pages 7-8 of the present application. Fig. 8(a) referred to in this paragraph is a cavity peak acoustic pressure plot for a prior art ink cavity of constant cross-sectional area, e.g. the ink cavity of the aforesaid standing wave adaption of Morita. Fig. 8(c) is a corresponding plot for an ink cavity according to the present invention. It can be seen that in the prior art, there is significant variation in acoustic pressure (significant pressure highs and lows) along the line of nozzle orifices, resulting in very non-uniform jet break up. In contrast, in the present invention, the variation in cross-sectional area evens out or smooths out the acoustic pressure highs and lows, resulting in the required uniform jet break up. Thus, the present invention makes practicable the standing wave adaption of Morita. Without the present invention, the adaption of Morita is not practicable, and results in non-uniform jet break up, as acknowledged in Morita.

Allowance of claims 10-18 is respectfully requested.